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FACT SHEET

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Inhalants

Background Information

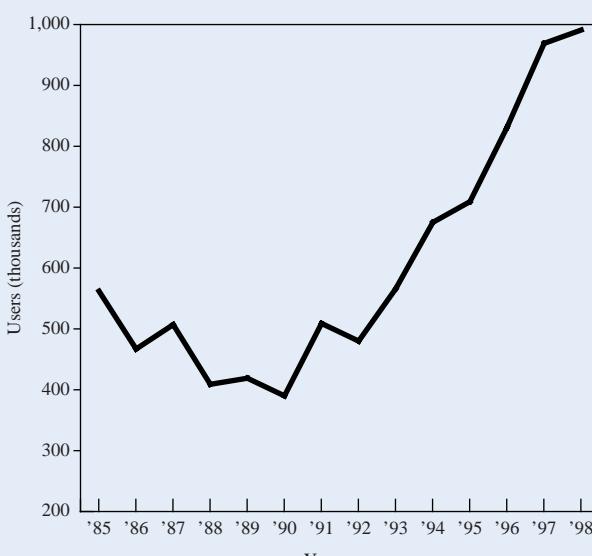
The term “inhalants” refers to more than a thousand different household and commercial products that can be intentionally abused by sniffing or “huffing” (inhaling through one’s mouth) for an intoxicating effect. These products are composed of volatile solvents and substances commonly found in commercial adhesives, lighter fluids, cleaning solutions, and paint products. Their easy accessibility, low cost, and ease of concealment make inhalants, for many, one of the first substances abused.

Typical first use occurs between late childhood and early adolescence. According to the National Household Survey on Drug Abuse (NHSDA), there were an estimated 991,000 new inhalant users in 1998, up from

509,000 in 1991 (see figure 1). The *2000 Monitoring the Future Study* from the University of Michigan reported that 9.4% of 8th graders used inhalants in the past year (see table 1).

According to the *1999 Youth Risk Behavior Surveillance Survey*, 14.6% of high school students nationwide have sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high at least once during their lifetime. Of these high school students, 4.2% had used inhalants in the 30 days preceding the survey. The *2000 Monitoring the Future Study* shows that 4.5% of 8th graders, 2.6% of 10th graders, and 2.2% of 12th graders used inhalants in the past month (see table 2).

Figure 1. Number of new inhalant users per year



Source: National Household Survey on Drug Abuse.

Table 1. Percentage of students reporting past-year inhalant use, 1994–2000

	1994	1995	1996	1997	1998	1999	2000
8th graders	11.7	12.8	12.2	11.8	11.1	10.3	9.4
10th graders	9.1	9.6	9.5	8.7	8.0	7.2	7.3
12th graders	7.7	8.0	7.6	6.7	6.2	5.6	5.9

Source: Monitoring the Future Study

Table 2. Percentage of students reporting past-month inhalant use, 1994–2000

	1994	1995	1996	1997	1998	1999	2000
8th graders	5.6	6.1	5.8	5.6	4.8	5.0	4.5
10th graders	3.6	3.5	3.3	3.0	2.9	2.6	2.6
12th graders	2.7	3.2	2.5	2.5	2.3	2.0	2.2

Source: Monitoring the Future Study

Inhalant Legislation, 2000

Much experimentation with inhalants, such as correction fluids and cleaning solvents, occurs with household and commercial products found in almost every

home and office. Although not regulated under the Controlled Substances Act (CSA), many State legislatures have attempted to deter youth who buy legal products to get high by placing restrictions on the sale of these products to minors. As reported by the National Conference of State Legislatures, 38 States have adopted laws preventing the sale, use, and/or distribution to minors of various products commonly abused as inhalants. Some States have introduced fines, incarceration, or mandatory treatment for the sale, distribution, use, and/or possession of inhalable chemicals.

States With Current Inhalant Legislation

Arizona	Nevada
California	New Hampshire
Colorado	New Jersey
Connecticut	New Mexico
Florida	North Carolina
Georgia	North Dakota
Hawaii	Ohio
Idaho	Oklahoma
Illinois	Oregon
Iowa	Pennsylvania
Kentucky	Rhode Island
Louisiana	South Carolina
Maine	South Dakota
Maryland	Tennessee
Massachusetts	Texas
Michigan	Utah
Minnesota	Vermont
Mississippi	Virginia
Nebraska	Wisconsin

Source: National Conference of State Legislatures.

Routes of Administration

Modes of administration entail sniffing or huffing directly from the containers for products such as rubber cement or correction fluid, sniffing fumes from plastic bags over the head, or sniffing cloth saturated with the substance. The substance may also be inhaled directly from an aerosol can or out of alternative containers such as a balloon filled with nitrous oxide. Some volatile substances may release intoxicating vapors when heated.

Effects

The effects of inhalant use resemble alcohol inebriation. On inhalation, the body becomes starved of oxygen, forcing the heart to beat more rapidly in an attempt to increase the flow of blood to the brain. The user initially experiences stimulation, loss of inhibition, and distorted perception of reality and spatial relations. Following this short period of time (usually only a few minutes, which users may refer to as a “head rush”), the senses become depressed and a sense of lethargy may arise as the body attempts to restabilize the flow of blood to the brain. Users can become intoxicated several times over a few hours because of the chemical’s short-acting, rapid-onset effect. Many users experience headaches, nausea or vomiting, slurred speech, loss of motor coordination, and wheezing.

Commonly Abused Commercial Products

Adhesives

Model airplane glue, rubber cement, household glue.

Aerosols

Spray paint, hair spray, air freshener, deodorant, fabric protector.

Anesthetics

Nitrous oxide, ether, chloroform.

Cleaning agents

Dry cleaning fluid, spot remover, degreaser.

Food products

Vegetable cooking spray, dessert topping spray (whipped cream), “whippets” (nitrous oxide).

Gases

Nitrous oxide, butane, propane, helium.

Solvents and gases

Nail polish remover, paint thinner, paint remover, typing correction fluid and thinner, toxic markers, pure toluene, toluol, cigar lighter fluid, gasoline, carburetor cleaner, octane booster.

Source: National Inhalant Prevention Coalition.

Heavy or sustained inhalant use causes tolerance to the inhalant, and physical withdrawal symptoms may develop within several hours to a few days after discontinuation. Withdrawal symptoms include sweating, rapid pulse, hand tremors, insomnia, nausea, vomiting, physical agitation, anxiety, hallucinations, and grand mal seizures. Indicators of inhalant abuse may include

Damage to Body Caused by Inhalants

Acoustic nerve and muscle

Destruction of cells that relay sound to the brain may cause deafness.

Blood

The oxygen-carrying capacity of the blood can be inhibited.

Bone marrow

Components containing benzene have been shown to cause leukemia.

Brain

Damage is also caused to the cerebral cortex and the cerebellum, resulting in personality changes, memory impairment, hallucinations, loss of coordination, and slurred speech.

Heart

Sudden sniffing death (SSD) syndrome,* an unexpected disturbance in the heart's rhythm, may cause fatal cardiac arrhythmias (heart failure).

Kidneys

The kidney's ability to control the amount of acid in the blood may be impaired. Kidney stones may develop after use is terminated.

Liver

Gathering of fatty tissue may cause liver damage.

Lungs

Damaged lungs and impaired breathing occurs with repeated use.

Muscle

Chronic use can lead to muscle wasting and reduced muscle tone and strength.

Peripheral nervous system

Damage to the nerves may result in numbness, tingling, and paralysis.

Skin

A severe rash around the nose and mouth, referred to as "glue sniffer's rash," may result.

*SSD syndrome may result when a user deeply inhales a chemical for the effect of intoxication. This causes a decrease in available oxygen in the body. If the user becomes startled or engages in sudden physical activity, an increased flow of adrenalin from the brain to the heart induces cardiac arrest and death occurs within minutes.

Source: National Inhalant Prevention Coalition.

Street Terms for Inhalants and Their Use

Air blast	Laughing gas (nitrous oxide)
Ames (amyl nitrite)	Locker room (isobutyl nitrite)
Amies (amyl nitrite)	Medusa
Amys (amyl nitrite)	Moon gas
Aroma of men (isobutyl nitrite)	Oz
Bagging (using inhalants)	Pearls (amyl nitrite)
Bang	Poor man's pot
Bolt (isobutyl nitrite)	Poppers (isobutyl nitrite, amyl nitrite)
Boppers (amyl nitrite)	Quicksilver (isobutyl nitrite)
Bullet (isobutyl nitrite)	Rush (isobutyl nitrite)
Bullet bolt	Rush snappers (isobutyl nitrite)
Buzz bomb (nitrous oxide)	Satan's secret
Climax (isobutyl nitrite)	Shoot the breeze (nitrous oxide)
Discorama	Snappers (isobutyl nitrite)
Glading (using inhalant)	Sniff
Gluey (one who sniffs or inhales glue)	Snorting (using inhalant)
Hardware (isobutyl nitrite)	Snotballs (rubber cement rolled into balls, burned, and the fumes inhaled)
Head cleaner	Thrust (isobutyl nitrite)
Heart-on	Toilet water
High ball	Toncho (octane booster)
Hippie crack	Whippets (nitrous oxide)
Honey oil	Whiteout
Huff	
Huffer (inhalant abuser)	
Huffing (sniffing an inhalant)	
Kick	

Source: Drug Policy Information Clearinghouse.

paint or stains on the body or clothing; spots or sores around the mouth; red or runny eyes and nose; chemical odor on the breath; a drunk, dazed, or dizzy appearance; loss of appetite; excitability; or irritability.

There is a common link between inhalant abuse and problems in school such as failing grades, memory loss, learning problems, chronic absences, and general apathy. Inhalant users also tend to be disruptive, deviant, or delinquent as a result of the early onset of

use, the user's lack of physical and emotional maturation, and the physical consequences that occur from extended use.

Sources

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This fact sheet was prepared by Michele Spiess at the ONDCP Drug Policy Information Clearinghouse. The data presented are as accurate as the sources from which they were drawn. Responsibility for their selection and presentation rests with the Clearinghouse staff. The Clearinghouse is funded by the White House Office of National Drug Control Policy to support drug control policy research. The Clearinghouse is a component of the National Criminal Justice Reference Service (NCJRS). For further information about the contents or sources used for the production of this fact sheet or about other drug policy issues, call:

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